

Applicant: Puskar, William L.  
Serial No.: 09/370,302

### Remarks

Concerning Item 1 of the subject action, the Examiner objects to the drawings under 37 CFR 1.83(a), asserting that "[t]he drawings must show every feature of the invention specified in the claims. Therefore, the transducers within sample fluid must be shown or the feature(s) cancelled from the claim(s)."

The applicant respectfully asserts that the drawings do indeed show every feature of the invention specified in the claims. For example, the feature of "transducers within sample fluid" is clearly shown in FIG. 34 (i.e., enclosure 410 housing sample liquid 412 in which a thermocouple 420 (i.e., a sensing transducer, see discussion below) is submerged).

Accordingly, the applicant respectfully asserts that the drawings are complete and, therefore, the objection to the drawings is improper.

Concerning Items 2 & 3 of the subject action, the Examiner rejects claim 24-44 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Specifically, the Examiner asserts that:

[t]he words "sensing transducers" is vague and unclear. There are electrodes within the sample fluid; however there is no transducer such as an ultrasonic transducer within the sample fluid. A sensor is defined as a device that responds to a physical stimulus and transmits a resulting impulse. A transducer is a device that is actuated by power from one system and supplies power usually in another form to a second system.

The applicant respectfully disagrees with the Examiner's assertion that the phrase "sensing transducer" is vague and ambiguous. The phrase "sensing transducer" is a term of art that is commonly used within the transducer industry. The applicant has attached computer printouts of several online articles that include the phrase "sensing transducer".

The specification of the subject application, page 27, lines 28-33 discloses the use of "two electrodes 654, 656 to measure conductivity, and a temperature measuring probe (e.g., a thermocouple) 658 to monitor the temperature of the fixed mass of aqueous solution 652. These transducers 654, 656 and 658 are connected to data wires for sampling the transducer responses. A data collection instrument (e.g., an A/D sensor interface board and a computer) connects to the wires ...".

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As the Examiner stated, the accepted definition of "transducer" is a device "that is actuated by power from one system and supplies power usually in another form to a second system." As clearly disclosed in the specification of the subject application, the applicant's transducer (e.g., the temperature measuring probe) is actuated by power (i.e., the thermal energy) from one system (i.e., the sample liquid) and supplies power (i.e., an electrical data signal) usually in another form to a second system (i.e., the applicant's data collection instrument).

Accordingly, the applicant respectfully asserts that the phrase "sensing transducer" is not indefinite. Therefore, the applicant respectfully asserts that claims 22-44 are patentable.

Concerning Items 2 & 4 of the subject action, the Examiner rejects claim 24-44 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Specifically, the Examiner asserts that:

[t]he term "sample fluid" in claims 22-44 is used to mean "a liquid enclosed within a probe whereby the liquid is responsive to ultrasonic energy, while the accepted meaning is "to judge a quantity of a fluid by inspecting a portion of the same fluid. The term is indefinite because the specification does not clearly redefine the term. The fluid (412) within the probe (402) (see fig. 34) does not contain the same fluid (407) inside the tank (408).

The applicant respectfully asserts that the Examiner is incorrectly defining the word "sample" as a verb instead of an adjective. Accordingly, when the Examiner asserts that the "accepted" meaning for "sample fluid" is "to judge a quantity of a fluid by inspecting a portion of the same fluid", the Examiner is incorrectly interpreting the word "sample" to be a verb, as opposed to the proper interpretation of an adjective. The Merriam-Webster definition of "sample" when used as an adjective is "serving as an illustration or example" (*See Merriam-Webster Online Dictionary @ www.merriam-webster.com*). I have attached a copy of a computer printout for the Examiner's review. Accordingly, when "sample" is used an adjective, the "accepted" meaning of "sample fluid" is a fluid that serves as an illustration or example.

Accordingly, the applicant respectfully asserts that the Examiner has incorrectly defined the word "sample" as a verb when it is being used as an adjective. Accordingly, the applicant respectfully asserts that the term "sample fluid" is not indefinite. Therefore, the applicant respectfully asserts that claims 22-44 are patentable.

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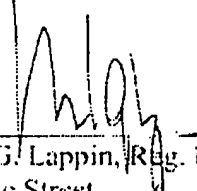
The applicant respectfully asserts that the subject application is now in condition for allowance. The Commissioner is hereby authorized to charge any additional fees that may be due, or credit any overpayment to Deposit Account No. 50-1133.


Respectfully Submitted,

MCDERMOTT, WILL & EMERY  
Customer No. 23630

Date:

5/19/04

  
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## Merriam-Webster Online Dictionary

Thesaurus


One entry found for sense.

Main Entry: <sup>2</sup>sense  
Function: *transitive verb*  
Inflected Form(s): **sensed; sens-ing**  
**1** a : to perceive by the senses **b** : to be or become conscious of <*sense danger*>  
**2** : GRASP, COMPREHEND  
**3** : to detect automatically especially in response to a physical stimulus (as light or movement)

For More Information on "sense" go to [Britannica.com](#)  
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Pronunciation Symbols

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Dictionary  
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sense

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**Merriam-Webster Online Dictionary**

Thesaurus

One entry found for **transducer**.

Main Entry: **trans-duc-er** 

Pronunciation: - 'dū-s&er, - 'dyū

Function: *noun*


: a device that is actuated by power from one system and supplies power usually in another form to a second system  
 <a loudspeaker is a *transducer* that transforms electrical signals into sound energy>


For More Information on "transducer" go to [Britannica.com](http://Britannica.com)


Get the Top 10 Search Results for "transducer"

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transducer

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## Merriam-Webster Online Dictionary

4 entries found for sample.  
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sample[1,noun]   


sample[2,transitive verb]  
sample[3,adjective]  
sample space

Main Entry: <sup>3</sup>sample  
Function: *adjective*  
: serving as an illustration or example <sample questions>

For More Information on "sample" go to [Britannica.com](http://Britannica.com)  
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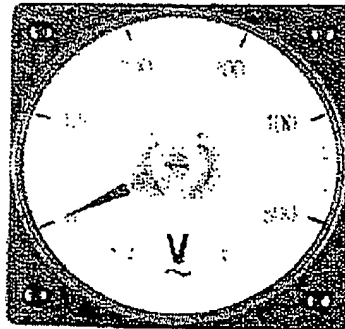


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## ELECTRICAL MEASURING INSTRUMENTS for Panels & Switchboards

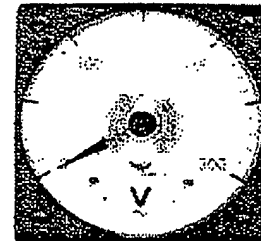
|| Product || Shape || Size || Shunt || Enquiry ||

<b>Company Profile</b>	
<b>General Specification</b>	
Meter carry CE mark	
Transducer type meter	
Frequency meter	
Power factor meter	
Watt meter VAR meter	
Var meter	
<b>DC type &amp; Rectifier type</b>	
Moving Coil meter	
Ammeter, Voltmeter	
Transducer type meter	
Rectifier type AC meter	
<b>DC Meter Movement</b>	
Laminated Yoke: KH-200	
Circular Yoke: KH-100	
<b>AC</b>	
Moving Iron meter	
Ammeter, Voltmeter	
Transducer type meter	
Maximum Demand meter	
<b>Shunt</b>	
Current Transformer	
Round type: K-11L	
Square type: ME-11L	
<b>Packaging</b>	
Warranty	
Observing	
Engineering Dept.	
Quality Assurance	
Accounting Dept.	

K-11  
K-11L

4 3/8 INCH

K SERIES



K-8

3 3/16 INCH

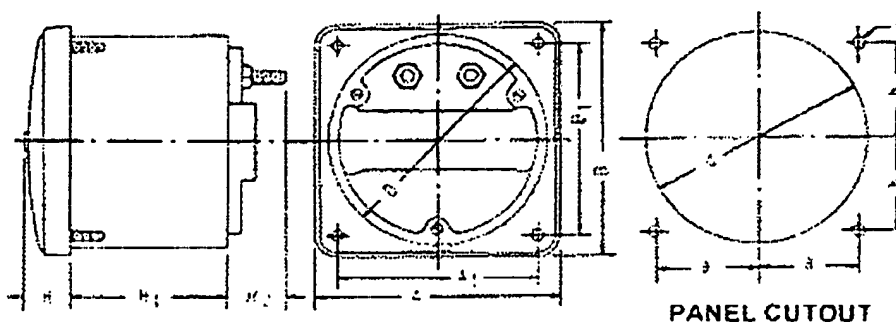
CHECK THE WIRING DIAGRAM

Classification		AVAILABLE INSTRUMENTS with CE MARK	
		Operating Principle	Full Scale Value or Rating
DC	AMMETERS	Moving Coil Type	1 mA up to 30A
	VOLTMETERS		50mV up to 1000V
	AMMETERS	Rectifier Type	1 mA up to 5A
	VOLTMETERS		3V up to 1000V
	FREQUENCY	Frequency Sensing Transducer Type	Voltage: 110, 220, 380, 440V Range: 45-55Hz, 55-65Hz, 45-65Hz
AC	METERS		
	WATT METERS	Power Sensing Transducer Type	Circuit: 1Ø, 3Ø3W, 3Ø4W Voltage: 110, 220, 380, 440V...
	VAR METERS		Current: 1A, 2.5A, 5A Scale: Lead 0.5~1~0.5 Lag
	POWER FACTOR METERS	Phase Angle Sensing Transducer Type	Circuit: 1Ø, 3Ø3W, 3Ø4W Balanced Voltage: 110, 220, 380, 440V... Current: 1A, 2.5A, 5A Scale: Lead 0.5~1.0~Lag 0.5

K-11L

ONLY

## K SERIES SWITCHBOARD METER: WATTMETER, VAR METER, AMMETER, VOLT... Page 2 of 2



Model	DIMENSIONS (Unit : mm)		
	K-11	K-11L	K-8
A	110	110	80
B	110	110	80
H	19	19	16
A1	90	90	65
B1	90	90	65
H1	72	130	78
H2	20	20	10
D	101	101	65
a	45	45	32.5
b	45	45	32.5
d	101.5	101.5	65.5
e	5.5	5.5	3.5

Send an E-mail to [herrong@ms4.hinet.net](mailto:herrong@ms4.hinet.net), with any question and comment to this web site.

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LAST UPDATE :2003/12/14

Sales Manager: Mr. C.K. Hsieh



## Company Info &gt; Brands &gt; Vishay Spectrol

## Vishay Spectrol



The Vishay Spectrol product group is a full line of variable resistive products, including precision potentiometers, trimming potentiometers, position sensing components, motion transducers, turn-counting dials, and accessories. A wide range of both single-turn and multi-turn devices are available, and many different terminal configurations including surface mount models are offered. The Vishay Spectrol portfolio features sensing transducer-type potentiometers used primarily in the automotive industry and trimmer potentiometers used in various electronics circuitry. Vishay Spectrol products complement the Vishay Sfernice transducer product line and strengthen Vishay's market position in potentiometers.

Recent additions to the Vishay Spectrol product range include a compact, single-turn rotary potentiometer with advanced design technology that can incorporate additions such as cables to simplify fitting in equipment. This product can be offered as a complete, assembled solution. Customized options include special electrical angles, mechanical packaging, and custom functions.

## Products

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Home > Resistors, variable > Motion transducers  
Home > Resistors, variable > Trimmers  
Home > Resistors, variable > Potentiometers

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## HAEFELY

### TECHNOLOGY

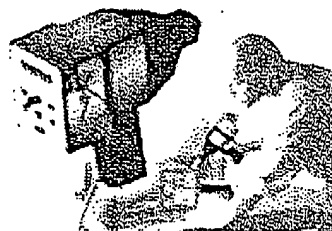
Product Catalogue

[back to product overview](#)

Products are available offering solutions from single impulse air discharges to multiple contact discharges covering the range 200V to 30'000Volt. Applications covered include testing to IEC and EN standards and automobile testing to ISO standards. In addition, modules are available to meet a broad spectrum of requirements and can also be built to customer specific needs.

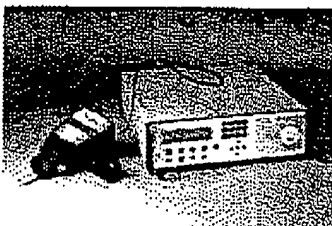
#### ■ PESD 1610

16kV Electro Static Discharge Simulator.



#### ► Features

- discharge voltage up to 16.5kV
- Lithium ion battery powered
- light weight, ergonomic hand held unit
- integrated in PEET4010 firmware
- polarity switching
- microprocessor control
- RS232 optical interface
- remote control software
- compact test solution
- test fingers for air and contact discharge
- IEC test level indication
- single and repetitive discharge modes
- discharge counter



#### ► One solution for:

EN/IEC 61000-4-2, ENV 50141, EN 50082-1, EN 50082-2, and many other applications

#### ► Benefits

- |                                   |                              |
|-----------------------------------|------------------------------|
| ■ Built-in Current flow detection | ■ Fully compliant ESD Tester |
| ■ Pre-programmed IEC test levels  | ■ Easy polarity switching    |

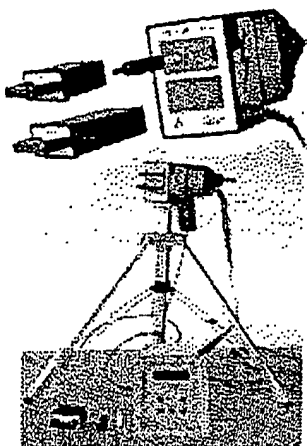
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#### ■ PESD 3010

30kV Electro Static Discharge Simulator.

#### ► Features



- CONTACT discharge to 30kV
- AIR discharge to 30kV
- Power supply in smart easily operated unit
- IEC test level indication

- Resistor MODULES available in range 50
- Capacitor MODULES available in range 5

- Single and repetition CONTACT discharge
- Discharge counter
- Lightweight design
- Supplied in hard carrying case

► One solution for:

EN/IEC 61000-4-2, ENV 50141, EN 50082-1, EN 50082-2, and others

With additional impulse modules: MIL1541, 331A, STANAG 4239, ISO 7637, ISO TR11

► Benefits

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ Unique CONTACT mode discharge detector</li> <li>■ Pre-programmed IEC test levels</li> <li>■ Automatic polarity switching available</li> </ul> | <ul style="list-style-type: none"> <li>■ Fast'n'easy set-up procedure</li> <li>■ Fully compliant ESD Tester</li> <li>■ Reduces operator fatigue and wear</li> </ul> |
|--|---|

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## accessories

### ■ Coupling Planes (HCP, VCP, GRP)

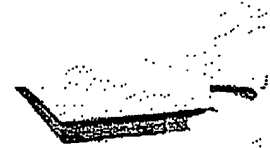
Indirect injection of ESD fields into the EUT can be accomplished using Horizontal and Vertical Coupling Planes. The Vertical Coupling Plane is effectively an antenna of dimensions 0.5m x 0.5m which is placed on the Horizontal Coupling Plane but isolated from it.

An ESD generator is then placed in the center of the vertical edge and at least 10 impulses of either polarity are applied. In cases where the EUT is large and cannot be placed on the test table, the Vertical Coupling Plane should be held parallel to and 0.1m from the EUT surface.

The Coupling Planes require the use of a special cable with 2 x 470kOhm resistors at either end. This is for connection to the Ground Reference Plane which should be connected to the protective earth system.



Vertical Coup.



Horizontal Coup

**■ EMC Standard Test Table**

The all wood table construction ( 0.8x0.8x1.6m) is necessary because the ESD phenomena is basically a radiation. Metal objects in the table construction would therefore distort the field.

Included with the test table is a Horizontal Coupling Plane which completely covers the table upper surface. This defines the maximum EUT size as being 0.6m x 1.4m.



EMC Test Ta

**■ Current Sensing Transducer**

The ESD generator must be periodically verified in terms of it's current impulse. The standard recommends use of a current sensing transducer as defined in annex B. This is also referred to as the 2 Ohm Target.

All measurement transducers manufactured by Haefely EMC Technology are calibrated at the Swisscom laboratory in Bern.

Calibration of ESD simulators is made in Contact mode with the test tip placed against the 2 Ohm Target.

The output of the target is taken to a shielded wide-band measurement system where the current impulse is measured and analysed.

